

Stakeholder Involvement

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Software Process Improvement (SPI) Project



Purpose and Objectives

- **Purpose:** Review the overall approach to planning, monitoring and controlling stakeholder involvement throughout your project
- **Objective - After this session you should know:**
 - Who your stakeholders may be
 - How to plan for stakeholder involvement
 - Approaches to monitoring and controlling stakeholder involvement
 - The kind of records to keep for stakeholder involvement
 - Some pitfalls associated with stakeholder involvement

For CMMI Maturity Level 2 stakeholder involvement in key activities must be planned, monitored, and controlled.

What Is A Stakeholder?

■ Dictionary definition

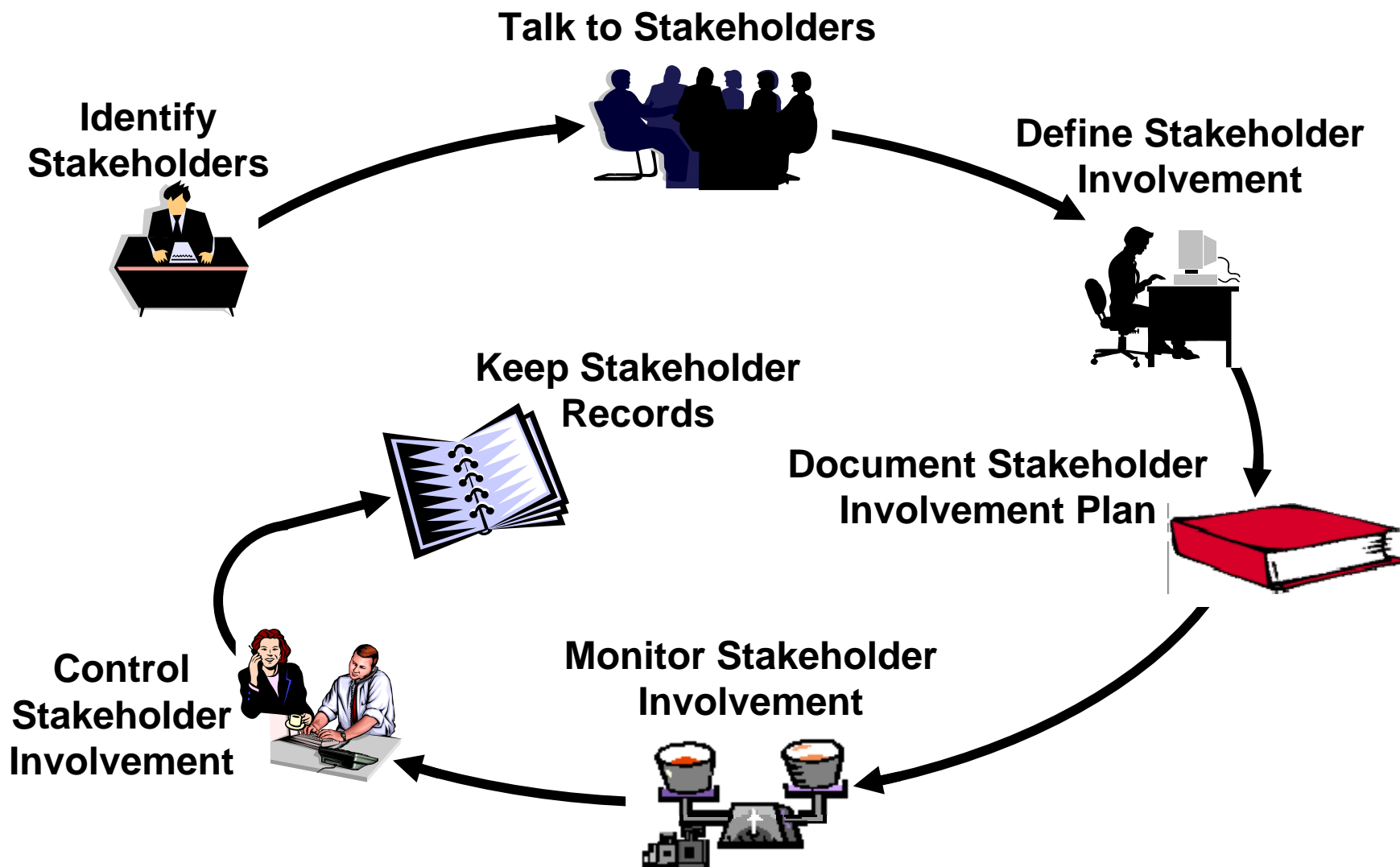
- One who has an interest or share in a commercial undertaking

■ CMMI definition

- Stakeholder: Those affected by or accountable for the outcome of your project.
- Relevant stakeholder: a stakeholder that is identified for involvement in specified activities and is included in an appropriate plan

View your relevant stakeholders as those who influence, or are influenced by, some aspect of the project.

How Do You Keep Stakeholders Involved?





Identify the Stakeholders

- **Look for relevant stakeholders who are**
 - Users of outputs from the project
 - Suppliers of inputs to the project
 - Performers of activities within the project processes
- **Relevant external stakeholders may include**
 - Suppliers (contractors, vendors)
 - Mission Project and interfacing subsystems
 - End Users and Operations Staff
- **Relevant internal stakeholders may include**
 - Software project members (testers, developers, etc.)
 - Your management



Talk to the Stakeholders

- Talk with stakeholders early in planning
- Find out what the stakeholder needs from you
- Discuss what you need from the stakeholder
- Find out ...
 - How much time they can provide
 - What areas they need to be involved in
 - What their priorities are
 - What their preferred coordination approach is
 - If the approach and time available will be adequate for your needs
- Find out what they will agree to – negotiate for what you need



Define the Involvement Approach

- **Identify activities where stakeholder involvement is needed**
 - Note what stakeholders are needed
 - Note the role of each stakeholder
- **Identify ways to keep each stakeholder involved, such as**
 - Meetings and telecons, with minutes (*yours and theirs*)
 - Internal project process meetings, including a Project Orientation Meeting to review project processes
 - Formal or informal reviews
 - Documentation review
 - Status Reports and Action Item lists
 - Email messages, Briefing Messages, letters, or memos
- **Identify artifacts to be collected**
 - Identify artifacts for each activity
 - Use existing artifacts (e.g., meeting attendance by “expected attendees” or roles)
- **Assess any risks associated with insufficient or excessive stakeholder involvement**



- **Document the coordination approach in SMP/PP (for Class B/C, see Section 3.3.4)**
 - Purpose and rationale for stakeholder's involvement
 - Importance to the project
 - Authority and responsibility of the stakeholder (Primary, Monitor, Input, Support, or Approval)
 - Responsibility on both sides of an interface, such as
 - Flight software to the flight hardware for working compatibility issues
 - Ground Data System to the Flight Operations Team for acceptance of the system
 - PDL to line management
 - PDT to Safety and Mission Assurance, IV&V, and ITA
 - How stakeholder involvement will be monitored and documented (e.g., by publishing expected attendees at reviews/walkthroughs and recording attendance)
 - Artifacts associated with stakeholder involvement (e.g. presentations, emails, walkthroughs, hardcopies of review materials)



Stakeholder Involvement Plan – SMP/PP Template Example

***The SMP/PP template is high level and must
be more specific relative to stakeholders,
activities, and involvement***

Project Development Team Activity	[Stakeholder A]	[Stakeholder B]	[Stakeholder C]	[Stakeholder D]
[Name or brief description of activity X]	[Rationale, Responsibility, Artifacts, etc.]	[Rationale, Responsibility, Artifacts, etc.]		
[Name or brief description of activity Y]				[Rationale, Responsibility, Artifacts, etc.]
[Name or brief description of activity Z]			[Rationale, Responsibility, Artifacts, etc.]	

***See the FSW example for the types of
specifics required***



Stakeholder Involvement Plan – FSW Template Example

SDO FSW Stakeholder Process Involvement Table																				
	SDO FSW Team									Project, Branch and IV&V										
Primary (P) Review (R) Provide Input (I) Approval (A) Support (S) Monitor (M)	FSW System Manager/FSW System Engr.	FSW Product Development Lead	FSW C&DH Lead or Designee	FSW ACS Lead or Designee	FSW Test Team Lead or Designee	FSW Development Team	FSW Lab Manager	FSW CMO	SOE	Project Management	Project Systems Engineer	GN&C Analyst	Hardware Group	Flight Ops Team	Branch Management	IV&V Program Manager	SDO Project Resource Manager	Mechanism for Involvement	Associated Artifacts	
Requirements Development																				
Meet with Stakeholders to understand requirements		P	P	P														Participate via meetings	Attendance Sheets Meeting Minutes	
Software Requirements Review	I	P	I	I	I	I					R	R	R	R		R		Participate via life cycle reviews	Attendance sheets, RFAs	
OPS Concept		I	I	I						A	I	I		P	I			Participate via meetings / online reviews	Attendance sheets Online Comments Requirement Docs	
Requirement Documents Walkthroughs	I		P	P	I	I				A	A	A						Participate via meetings	Attendance Sheets	
Obtaining Requirements Approval	A	P	A	A	A						I	I	I	I				Stakeholder's signature is required	Online approval (emails, Project Doc.website) Signature page	
Requirements Management																				
Manage Changes to Requirements	S	P	P	P	I	I												Participate via online reviews	CCR records DCR records Req Pro database	
Project Planning																				
Product Plan Review	A	P	I	I	I				M	A						A		Participate via online reviews; Stakeholder's signature is required	The Product Plan Draft revisions (online reviews). Signature page of the baselined document	
Team Walkthrough		P	P	P	P	R			M									Participate via meetings	Attendance sheets	

Process Areas to Be Covered

- **Management** process areas :
 - Project Planning
 - Project Monitoring and Control
 - Configuration Management
 - Quality Assurance
 - Measurement and Analysis
 - Requirements Management
 - Acquisition Management
- **Technical** process areas :
 - Technical Solution
 - Risk Management
 - Requirements Development
 - Product Integration
 - Verification
 - Validation



Monitor Stakeholder Involvement

- **Collect stakeholder involvement records, such as**
 - Meeting attendance and minutes
 - Review attendance and minutes
 - Stakeholder approvals, commitments, sign-offs, etc.
 - Documented review comments or signed review sheet
 - Status report distribution lists
 - Action item status
 - Emails and Briefing Messages cataloged by stakeholder group
- **Store stakeholder involvement artifacts in accordance with your data management plan**
- **Use artifacts to assess involvement relative to your plan and to evaluate any stakeholder risks**



Control Stakeholder Involvement

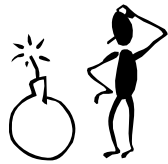
- **Assess effectiveness of involvement**
 - Verify that information sharing is happening
 - Verify that agreements are being reached
 - Verify that commitments are being honored
- **Take corrective action where involvement is not adequate**
 - Talk to stakeholders to determine the problem cause
 - Modify approaches to improve involvement
 - Document corrective action (e-mail of information, reschedule of meeting, etc.)
 - Take stakeholder involvement into your hands with regular communication – and document it
 - Escalate real problem areas to management
- **Report involvement status to management with other status**



Keep Stakeholder Records

Products of stakeholder involvement that should be kept in the project data stores:

- **Stakeholder plan in SMP/PP**
 - List of stakeholders
 - Activities where stakeholder involvement is needed
 - Stakeholder involvement approaches
 - Stakeholder involvement artifacts
- **Stakeholder involvement artifacts collected, such as**
 - Minutes from stakeholder agreement meetings
 - Review comments and approvals
 - Formal/informal review presentations/minutes/attendees
 - Training presentations/attendees
- **Stakeholder involvement monitoring artifacts (attendance notes, emails to key stakeholders who missed meetings, etc.)**
- **Stakeholder involvement status reports where critical issues exist**



Watch Out for the Pitfalls

- **Not including important stakeholders**
- **Having too many different meetings or reviews to cover the stakeholders**
- **Not using existing artifacts to track coordination**
- **Not following up on commitments to or from stakeholders**
- **Stakeholders who are focused on other things and too busy for your project**
- **The fine line between pushing involvement and becoming a pest**



How Do *You* Work With Stakeholders?

- **Assume you're involved in a software development project for a specific Mission.**
 - **Who are your stakeholders likely to be?**
 - **What are some of the ways you would involve these stakeholders?**
 - **How would you track the involvement ?**



Summary

- Know who all of your stakeholders are
- Plan for their involvement and participation
- Define and document your stakeholder involvement process
- Plan for stakeholder involvement artifact collection and analysis
- Use the artifacts to help track stakeholder involvement
- Periodically assess the effectiveness of your stakeholder involvement plan

And remember ... you, too, are somebody's stakeholder, so be responsive

Questions?